NORTHWEST REGION
EMS & TRAUMA SYSTEM

PATIENT CARE PROCEDURES

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INTRODUCTION

The Northwest Region's Patient Care Procedures are designed to serve as a guide to Medical Program Directors, trauma verified EMS agencies, 9-1-1 centers and EMS personnel as to how and when to activate the Northwest Region's Trauma System. These procedures apply to Clallam, Jefferson, Kitsap and Mason Counties.

The following Regional Patient Care Procedures are intended as an approach toward the proper and rapid treatment of major trauma patients in the Northwest Region.

OBJECTIVE OF THE TRAUMA SYSTEM

The objective of the EMS & Trauma System in the Northwest Region is to transport the proper patient to the proper facility in the proper amount of time based on their "trauma needs" and medical needs. As such, major trauma patients from the following categories should be considered at high risk for death or disability and should be considered for transfer or transport to the appropriate Level I or Level II trauma center.

Central Nervous System Injuries

Head injury with any of the following:

- Open, penetrating, or depressed skull fracture
- CSF leak
- Severe coma
- Deterioration in Glasgow Coma Score of 2 or more points
- Lateralizing signs
- Unstable spine
- Spinal cord injury

Chest

Suspected great vessel or cardiac injuries
Major chest wall injury
Patient who may require positive pressure ventilation

Pelvis

Pelvic ring disruption with shock requiring more than 5 units transfusion
Evidence of continued hemorrhage
Compound/open pelvic injury with head injury
Burns with head injury

Multiple System Injury

Severe facial injury with head injury
Chest injury with head injury
Abdominal or pelvic injury with head injury
Burns with head injury

Specialized Problems

Burns over 20 percent of the patient's body surface area involving airway
Carbon monoxide poisoning
Barotrauma

Secondary Deterioration (Late Sequelae)

Patient requiring mechanical ventilation
Sepsis
Organ system(s) failure (deterioration in CNS, cardiac, pulmonary, hepatic, renal or coagulation system(s)
Osteomyelitis

EMT's and/or Paramedics shall use the State of Washington's Prehospital Trauma Triage (Destination) Procedures [Addendum 1] and be knowledgeable of the steps required to activate the Trauma System. In general, major trauma patients who meet the major trauma criteria listed above should be immediately transported or transferred to Harborview Trauma Center in Seattle.

ACTIVATION OF TRAUMA SYSTEM

Upon evaluation of the patient(s) and determination of the need for a trauma team, the Paramedic, EMT, or appropriate medical personnel shall contact medical control at the nearest or most appropriate designated trauma center and request the activation of the Trauma System.

Once identified, trauma patients should be banded, treated, transported and trauma data collected as quickly as possible. In all cases, the goal of the Northwest Region Trauma System is to have all major trauma patients delivered to the most appropriate trauma center to meet the needs of the patient within 60 minutes from the time of arrival of EMS on scene of the trauma incident.

DESIGNATED TRAUMA CENTERS

Washington State Department of Health has designated five trauma centers in the Northwest Region to receive major trauma patients.

Those trauma centers and their designation levels are:

Location	Facility	Level
Clallam County	Forks Community Hospital	IV
	Olympic Memorial Hospital	IV
Jefferson County	Jefferson General Hospital	IV
Kitsap County	Harrison Memorial Hospital	III
Mason County	Mason General Hospital	IV

DATA COLLECTION

WAC 246-976-420 Trauma Registry directs the Department of Health to ***"establish a state-wide data registry to collect and analyze data on the incidence, severity, and causes of trauma, including traumatic brain injury {RCW 70.168.060(16)},*** [Addendum 2] ***{RCW 70.168.090(1)}"*** [Addendum 3] for the purposes of:

a. Monitoring and providing information necessary to evaluate major trauma patient care and outcome;
b. Assess compliance of prehospital providers, health care facilities, hospitals and rehabilitation services with the standards of state trauma system operation and designation;
c. Provide information necessary for resource planning and management;
d. Provide data for injury surveillance, analysis and prevention programs; and
e. Provide a resource for research and education.

WAC 246-976-430 Trauma Registry – Department responsibilities directs:

1. All licensed prehospital services shall:

a. Use the following criteria for inclusion of patient data in the trauma registry:

   i. Trauma victims dead at scene; and

   ii. All patients meeting the State of Washington Prehospital Trauma Triage (Destination) Procedures [Addendum 1] tool who are transported to a health care facility;

b. Submit required registry data via electronic transfer; or, if authorized in writing by the department, on approved paper forms.

Data shall arrive at the DOH registry in an approved format no later than ninety days after the end of the quarter.

DEFINITIONS

WAC 246-976-010 Definitions. Unless a different meaning is plainly required by the context, the following words and phrases used in this chapter shall have the meanings indicated:

"ACLS" means advanced cardiac life support, a course developed by the American Heart Association.

"Activation of the trauma system" means a process whereby a prehospital provider identifies the major trauma patient by using the prehospital trauma triage procedures, and notifies from the filed both dispatch and medical control, who mobilize resources to care for the patient in accordance with regional patient care procedures.

"Advanced life support" means invasive emergency medical services requiring advanced medical treatment skills as defined in chapter 18.71 RCW. {RCW 18.73.030(18)}

"Agency response time" means the time from agency notification to arrival on the scene. It is the same as the combination of activation and enroute times defined under system response times in this section.

"Aid service" means an agency, public or private, that operates one or more aid vehicles.

"Aid vehicle" means a vehicle used to carry aid equipment and individuals trained in first aid or emergency medical procedure. {RCW 18.73.030(5)}

"Air ambulance" means a fixed or rotary-winged aircraft that is configured to accommodate a minimum of one litter and two medical attendants with sufficient space to provide intensive life-saving care without interfering with the performance of the flight crew, and has been inspected and licensed by the department as an air ambulance.

"Airway technician" means a person certified to provide mobile airway management as defined in this chapter.

"Ambulance" means a ground or air vehicle designed and used to transport the ill and injured and to provide personnel, facilities, and equipment to treat patients before and during transportation. {18.71.030(4)}

"Ambulance service" means an agency, public or private, that operates one or more ground or air ambulances.

"Approved" means approved by the department of health.

"ATLS" means advanced trauma life support, a course developed by the American College of Surgeons.

"Attending surgeon" means a physician who is board-certified board-eligible in general surgery, and who has surgical privileges delineated by the facility's medical staff. The attending surgeon is responsible for care of the trauma patient, participates in all major therapeutic decisions, and is present during operative procedures.

"Basic life support" means noninvasive emergency medical services requiring basic medical treatment skills as defined in chapter 18.73 RCW. {RCW 18.73.030(17)}

"BP" means blood pressure.

"Certification" means recognition by the department of the competence of an individual who has met predetermined qualifications, and the authorization of the individual to perform certain procedures for which they have been trained or are otherwise qualified.

"CME" means continuing medical education.

"Communications system" means a radio and landline network which provides rapid public access, coordinated central dispatching of services, and coordination of personnel, equipment, and facilities in an EMS/TC system. {RCW 18.73.030(12)}; {RCW 70.168.015(1)}

"Consumer" means an individual who is not associated with the EMS/TC system, either for pay or as a volunteer, except for service on the steering committee, licensing and certification committee, or regional or local EMS/TC councils.

"Continuing medical education (CME)" means ongoing education after initial certification for the purpose of maintaining and enhancing skill and knowledge.

"Council" means the local or regional EMS/TC as authorized under chapter 70.168 RCW. {RCW 18.73.030(16)}

"Course coordinator" means an individual who has overall administrative responsibility for coordinating an EMS/TC course or program of continuing education.

"CPR" means cardiopulmonary resuscitation.

"Department" means the department of health. {RCW 18.73.030}; {RCW 70.168.015(4)}

"Designated trauma care service" means a level I, II, III, IV, or V trauma care service, or level I, II, or III pediatric trauma care service, or level I, I-pediatric, II, or III trauma-related rehabilitative service. {RCW 70.168.015(6)}

"Designation" means a formal determination by the department that a hospital or health care facility is capable of providing designated trauma care services as authorized in RCW 70.168.070. {RCW 70.168..015(5)}

"Dispatch" means to designate and direct an emergency response unit to a service location.

"E-code" means external cause code, an etiology included in the International Classification of Disease (ICD).

"ED" means emergency department.

"Emergency medical dispatch (EMD)" means provision of special procedures and trained personnel to ensure the efficient handling of medical emergencies and dispatch of aid. It includes prearrival instructions for CPR and other verbal aid to callers.

"Emergency medical service (EMS)" means medical treatment and care which may be rendered at the scene of any medical emergency or while transporting any patient in an ambulance to an appropriate medical facility, including ambulance transportation between medical facilities. {RCW 18.73.030(11)}; {RCW 70.168.015(2)}

"Emergency medical services and trauma care (EMS/TC) planning and services regions" means geographic areas established by the department in accordance with RCW 70.168.110. {RCW 70.168.015(8)}

"Emergency medical services and trauma care (EMS/TC) system" means an organized approach to providing personnel, facilities, and equipment for effective and coordinated medical treatment of patients with a medical emergency or injury requiring immediate medical or surgical intervention to prevent death or disability. The emergency medical service and trauma care system includes prevention activities, prehospital care, hospital care, and rehabilitation. The components of an EMS and trauma care system include:

- Provision of manpower;
- Training of personnel;
- Communications;
- Transportation;
- Facilities;
- Critical care units;
- Use of public safety agencies;
- Use of private agencies
- Consumer participation;
- Accessibility to care;
- Transfer of patients;
- Standard medical record keeping and reporting;
- Consumer information and education;
- Independent review and evaluation, including formal quality assurance programs;
- Disaster linkage; and
- Mutual aid agreements.

"Emergency medical services and trauma care system plan (EMS/TC plan)" means a plan that identifies statewide EMT/TC objectives and priorities and identifies equipment, facility, personnel, training, and other needs required to create and maintain a state-wide EMT/TC. {RCW 70.168.015(7)}

"Emergency medical technician (EMT)" means a person who is authorized by the secretary to render emergency medical care pursuant to RCW 18.73.081. {RCW 18.73(6)}

"EMS/TC" means emergency medical services and trauma care.

"EMT" means emergency medical technician.

"Facility patient care protocols" means the written procedures adopted by the medical staff that direct the care of the patient. These procedures shall be based upon the assessment of the patient's medical needs. The procedures shall follow minimum state-wide standards for trauma care service. {RCW 70.168.015(9)}

"First responder" means a person who is authorized by the secretary to render emergency medical care as defined by RCW 18.73.081. {RCW 18.73.030(19)}

"HIV/AIDS" means human immunodeficiency virus/acquired immunodeficiency syndrome.

"Hospital" means a facility licensed under chapter 70.41 RCW, or comparable health care facility operated by the federal government or located and licensed in another state. {RCW 70.168.015(10)}

Hospital trauma service" means a service designed by the hospital within state guidelines for the treatment of trauma patients, including a formal commitment by the hospital and medical staff to an organized trauma care system and to participation in the regional/state system.

"ICD" means the international classification of diseases, a coding system developed by the World Health Organization.

"ICU" means intensive care unit.

"Indicator" means a quality improvement tool or performance measure used to monitor the quality of important governance, management, clinical, and support processes and outcomes.

"Indicator monitoring system" means a method in which indicators are used to monitor important processes or outcomes of care or service, and indicator data are used to evaluate that care.

"Injury prevention" means any combination of educational, legislative, enforcement, engineering and emergency response initiatives used to reduce the number and severity of injuries.

"Intermediate life support technician" means a person certified to provide levels of intermediate support skills as defined in this chapter.

"IV technician" means a person certified to provide mobile intravenous therapy as defined in this chapter.

"L & C" means licensing and certification.

"Legend drug" means any drug which is required by state law or regulation by the state board of pharmacy to be dispensed on prescription only, or is restricted to use by practitioners only.

"Level I pediatric rehabilitative services" means pediatric trauma care services ad defined by RCW 70.168.015. Facilities providing level I pediatric rehabilitative services provide the same services as facilities authorized to provide level I rehabilitative services, except these services are exclusively for children under the age of fifteen years.

"Level I pediatric trauma care services" means rehabilitative services as defined by RCW 70.168.015. Hospitals providing level I services shall provide definitive, comprehensive, specialized care for pediatric trauma patients and shall also provide ongoing research and health care professional education in pediatric trauma care. {RCW 70.168.015(11)}

"Level II pediatric trauma care services" means pediatric trauma care services as defined by RCW 70.168.015. Hospitals providing level II services shall provide initial stabilization and evaluation of pediatric trauma patients and provide comprehensive general medical and surgical care to pediatric patients who can be maintained in a stable or improving condition without the specialized care available in the level I hospital. Complex surgeries and research and health care professional education in pediatric trauma care activities are not required. {RCW 70.168.015(12)}

"Level III pediatric trauma care services" means pediatric trauma care services as defined by RCW 70.168.015. Hospitals providing level III services shall provide initial evaluation and stabilization of patients. The range of pediatric trauma care services provided in level III hospitals is not as comprehensive as level I and II hospitals. {RCW 70.168.015(13)}

"Level I rehabilitative services" means rehabilitative services as defined by RCW 70.168.015. Facilities providing level I rehabilitative services provide rehabilitative treatment to patients with traumatic brain injuries, spinal cord injuries, complicated amputations, and other diagnoses resulting in functional impairment, with moderate to severe impairment or complexity. These facilities serve as referral facilities for facilities authorized to provide level II and III rehabilitative services. {RCW 70.168.015(4)}

"Level II rehabilitative services" means rehabilitative services as defined by RCW 70.168.015. Facilities providing level II rehabilitative services treat individuals with musculoskeletal trauma, peripheral nerve lesions, lower extremity amputations, and other diagnoses resulting in functional impairment in more than one functional area, with moderate to severe impairment or complexity. {RCW 70.168.015(16)}

"Level III rehabilitative services" means rehabilitative services as defined by RCW 70.168.015. Facilities providing level III rehabilitative services provide treatment to individuals with musculoskeletal injuries**,** peripheral nerve injuries, uncomplicated lower extremity amputations, and other diagnoses resulting in functional impairment in more than one functional area but with minimal to moderate impairment or complexity. {RCW 70.168.015(17)}

"Level I trauma care services" means trauma care services as defined by RCW 70.168.015. Hospitals providing level I services shall have specialized trauma care teams and provide ongoing research and health care professional education in trauma care. {RCW 70.168.015(18)}

"Level II trauma care services" means trauma care services as defined by RCW 70.168.015. Hospitals providing level II services shall be similar to those provided by level I hospitals, although complex surgeries and research and health care professional education activities are not required to be provided. {RCW 70.168.015(20)}

"Level III trauma care services" means trauma care services as defined by RCW 70.168.015. The range of trauma care services provided by level III hospitals are not as comprehensive as level I and II hospitals. {RCW 70.168.015(20)}

"Level IV trauma care services" means trauma care services as defined by RCW 70.168.015. {RCW 70.168.015(21)}

"Level V trauma care services" means trauma care services as defined by RCW 70.168.015. Facilities providing level V services shall provide stabilization and transfer of all patients with potentially life-threatening injuries. {RCW 70.168.015(22)}

"Licensing and certification committee (L&C committee)" means the emergency medical services licensing and certification advisory committee created by RCW 18.73.040.

"Local Council" means a local EMS/TC council authorized by RCW 70.168.120(1).

"Local medical community" means the organized local medical society existing in a county or counties; or in the absence of an organized medical society, majority physician consensus in the county or counties.

"Medical control" means MPD authority to direct the medical care provided by all certified EMS personnel involved in patient care in the prehospital EMS system.

"Medical control agreement" means a written agreement between two or more MPD's, consistent with regional plans, to assure continuity of patient care between counties, and to facilitate assistance.

"Medical program director (MPD)" means an approved emergency medical services medical program director as defined by RCW 18.71.205(4). {RCW 18.73.030(15)}

"MPD" means medical program director.

"Name code" means the first four letters of the last name, followed by the first and middle initials.

"National uniform data set" means a coding system which describes the functional abilities and disabilities of the disabled person, p7ublished by the State University of New York, Buffalo, NY.

"Ongoing training and evaluation" means a course of education as authorized in RCW 1.73.082(3)(b).

"PALS" means pediatric advanced life support, a course developed by the American Heart Association.

"Paramedic" means a person certified to provide mobile intensive care paramedic services as defined in RCW 18.72.200(3).

"Patient care procedures" means written operating guidelines adopted by the regional EMS/TC council, in consultation with local EMS/TC councils, emergency communications centers and the MPD's, in accordance with state-wide minimum standards. The patient care procedures identify the level of medical care personnel to be dispatched to an emergency scene, procedures for triage of patients, the level of trauma care facility to first receive the patient, and the name and location of other trauma care facilities to receive the patient should an interfacility transfer be necessary. Procedures on interfacility transfer of patients shall be consistent with the transfer procedures in chapter 70.170 RCW. {RCW 18.73.030(14)}; {RCW 70.168.015(23)}

"Pediatric trauma patient" means trauma patients known or estimated to be less that fifteen years of age. {RCW 70.168.015(24)}

"Physician" means an individual licensed under the provisions of chapter 18.71 RCW. Physicians, or under the provisions of chapter 18.57 RCW, Osteopathy –Osteopathic medicine and surgery.

"Practical examination" means a test which is conducted in the initial course, or a test or series of evaluations during a recertification period, wherein the competency of a person is determined on each of the practical skills specified by the department.

"Prehospital" means emergency medical care or transportation rendered to patients prior to hospital admission or during interfacility transfer by licensed ambulance or aid service under chapter 18.73 RCW by personnel certified to provide emergency medical care under chapters 18.71 and 18.73 RCW, or by facilities providing level V trauma care services as provided for in chapter 18.71 RCW. {RCW 70.168.015(25)}

"Prehospital agencies" means both public and private providers of prehospital care or interfacility transport.

"Prehospital index" means a scoring system for hospital trauma team activation, incorporating assessment of systolic blood pressure, pulse, respiratory status, and level of consciousness, as described in "Prehospital Index: A scoring system for field triage of trauma victims," Koehler, John J., M.D. et. al. Annals of Emergency Medicine 1986; 15:178-182.

"Prehospital patient care protocols" means the written procedures adopted by the MPD which direct the out-of-hospital emergency care of the emergency patient which includes the trauma care patient. {RCW 18.73.030(13)}; {RCW 70.168.015(26)}

"Prehospital trauma care services" means both public and private agencies that are verified to provide Prehospital trauma care.

"Public education" means the use of preventive measures, involving the education of the population at large, targeted groups or individuals, and efforts to alter specific injury-related behaviors.

"Quality assurance (QA)" means an organized method of auditing and evaluating care provided within EMS/TC systems.

"Reciprocity" means the process by which an individual certified in another state, or certified by the University of Washington's school of medicine as authorized by RCW 18.72.200, is certified by the department.

"Region" means a geographic area used for EMS/TC planning, designated by the department in accordance with RCW 70.168.110. {RCW 70.168.015 – modified}

"Regional council" means the regional EMS/TC council established by RCW 70.168.100.

Regional plan" means the approved plan that identifies region-wide EMS/TC objectives and prioritizes and identifies equipment, facilities, personnel, training, and other needs required to create and maintain a region-wide EMS/TC system. The plan includes a strategy of implementation that identifies regional and local activities to create, operate, maintain, and enhance the system.

"Registered nurse" means an individual licensed under the provisions of chapter 18.88 RCW.

"Rehabilitative services" means a formal program of multidisciplinary, coordinated, and integrated services for evaluation, treatment, education, and training to help individuals with disabling impairments achieve and maintain optimal functional independence in physical, psychosocial, social, vocational, and avocational realms. {RCW 70.168.015(27)}

"Reinstatement" means the process by which an individual whose EMS certification has expired can be recertified.

"Response area" means a service coverage zone identified in an approved regional plan.

"Rural" means unincorporated or incorporated areas with total populations less than ten thousand people, or with a population density of less than one thousand people per square mile.

"Senior EMT instructor" means an individual approved to be responsible for the quality of instruction of an initial EMS training course.

"Specialized training" means approved training of certified EMS personnel to use a skill, technique, or equipment that is not included in the standard course curriculum.

"State trauma registry" means data collected for examining the entire spectrum of trauma patients and their care, regardless of injury, hospital, or outcome.

"Steering committee" means the EMS/TC steering committee created by RCW 70.168.020.

"Suburban" means:

An incorporated or unincorporated area with a population of ten thousand to twenty-nine thousand nine hundred ninety nine; or

Any area with a population density of one thousand to two thousand people per square mile.

"System response time" for trauma means the time from an injury until the patient arrives at a designated trauma facility. It includes:

"System access time": The time from discovery to call received:

"911 time": The time it takes the call answerer to:
Process the call, including citizen interview; and
Give the information to the dispatcher;

"Dispatch time": The time from call received by the dispatcher to the time the agency is notified;

"Activation time": The time from agency notification to start of response;

"Enroute time": The time from the end of activation time to the beginning of on-scene time;

"On scene time": The time the unit is on the scene with the patient. This includes extrication, resuscitation, treatment, and loading;

"Transport time": The time from leaving the scene to arrival at a health care facility;

"Training agency" means an organization or individual, which may include local or regional EMS/TC councils, that is approved to train EMS personnel for initial certification.

"Training physician" means a physician delegated by the MPD and approved by the department to be responsible for specified aspects of training of EMS personnel.

"Trauma" means a major single or multisystem injury requiring immediate medical or surgical intervention or treatment to prevent death or permanent disability. {RCW 70.168.015(29)}

"Trauma care system" means an organized approach to providing care to trauma patients that provides personnel, equipment, and facilities for effective and coordinated trauma care. The trauma care system includes: Prevention, prehospital care, triage of trauma victims from the scene to designated trauma services, facilities with specific capabilities to provide trauma care, acute hospital care, and rehabilitation services. {RCW 70.168.015(30)}

"Trauma rehabilitation coordinator" means a person designated to facilitate early rehabilitation interventions and the trauma patient's access to a designated rehabilitation center.

"Trauma surgeon" means a physician who is board certified or board eligible in general surgery, and who has trauma surgery privileges delineated by the facility's medical staff.

"Triage" means the sorting of patients in terms of disposition, destination, or priority. Triage of prehospital trauma victims requires identifying injury severity so that the appropriate care level can be readily assessed according to patient care guidelines. {RCW 70.168.015(31)}

"Unit of learning" means a method of meeting the CME requirements of this chapter, which includes:

Approved learning objectives that reflect a complete patient care approach and to a topic or group of related topics; and

Measures a student's comprehension of the subject matter by written testing and demonstration of skills.

"Urban" means:

An incorporated area over thirty thousand; or

An incorporated or unincorporated area of at least ten thousand people and a population density over two thousand people per square mile.

"Verification" means the identification of prehospital providers capable of providing verified trauma care services, and is part of the licensure process described in chapter 18.73 RCW. {RCW 70.168.015(32)}

"Verified trauma care service" means prehospital services as provided for in RCW 70.168.080, and identified in the regional EMS/TC plan as required by RCW 70.168.100, whose capabilities have been verified by the department. {RCW 70.168.015(33)}

"Wilderness" means:

Any rural area not readily accessible by public or private maintained road.

PATIENT CARE PROCEDURE – Dispatch

Standard

Provide timely care to all trauma patients so major trauma patients are provided appropriate medical treatment within the "golden hour" of trauma treatment.

As outlined in the Regional Trauma System Plan, "Dispatch Time" is defined as "the time from when the call is received by dispatch to the time the agency is notified" (WAC 246-976-010) [See Definitions].

As outlined in the Regional Trauma System Plan, "Response Time" is measured from "the time the call is received by the trauma verified service to the time of arrival on-scene".

For major trauma patients, the following time guidelines are to be used (measured from the time the call is received by the trauma verified service to the time of arrival on-scene):

First Response (80 percent of the time)

Urban Areas	4 minutes
Suburban Areas	5 minutes
Rural/rural-suburban	12 minutes
Wilderness/Marine/Frontier	As soon as possible

Transport Response Time (80 percent of the time)

Urban Areas	8 minutes
Suburban Areas	15 minutes
Rural/rural-suburban	35 minutes
Wilderness/Marine/Frontier	As soon as possible

Procedure

A licensed ambulance and/or aid service shall be dispatched to all emergency and trauma incidents in the Northwest Region.

The highest level trauma verified ambulance in the response area should be dispatched to transport all known or suspected major trauma patients who meet, or are suspected to meet, the State of Washington Prehospital Trauma Triage (Destination) Procedures [Addendum 1].

PATIENT CARE PROCEDURE – Response Times

Standard

All licensed ambulance and aid services shall respond to emergency medical and trauma incidents in a timely manner in accordance with the Northwest Region Plan and State WAC 246-976-390(11) [Addendum 4] and WAC 246-976-390(12) - Verification of Trauma Care Services [Addendum 5].

The Northwest Region EMS Council has identified the following urban, suburban, rural-suburban, rural and wilderness/marine/frontier areas response times in the Northwest Region Trauma Plan.

First Response (80 percent of the time)

Urban Areas	4 minutes
Suburban Areas	5 minutes
Rural/rural-suburban	12 minutes
Wilderness/Marine/Frontier	As soon as possible

Transport Response Time (80 percent of the time)

Urban Areas	8 minutes
Suburban Areas	15 minutes
Rural/rural-suburban	35 minutes
Wilderness/Marine/Frontier	As soon as possible

Procedure

In all major trauma cases, the Golden Hour shall be a dispatch/response/transport goal whenever possible.

A trauma verified service should proceed in an emergency mode to all suspected major trauma incidents until which time they have been advised of injury status to the patients involved.

PATIENT CARE PROCEDURE – Triage and Transport

Standard

All licensed ambulance/transport and aid services shall comply with the Northwest Region EMS & Trauma System Plan, Simple Triage and Rapid Treatment (START Triage) Protocol [Appendix 6] and the State of Washington Prehospital Trauma Triage (Destination) Procedures [Addendum 1] and transport trauma patients to the most appropriate designated trauma center.

When a destination facility is placed on divert status, field personnel shall transport to the next closest – equal or higher designated trauma facility.

Procedure

The first trauma care providing agency to determine that the patient needs definitive medical care or meets the State of Washington Trauma Triage (Destination) Procedures [Addendum 1] criteria, shall ensure immediate contact with a Level I or Level II trauma designated facility or the agency's on-line medical control.

The receiving facility must be provided with the following information, as outlined in the State of Washington Prehospital Trauma Triage (Destination) Procedures [Addendum 1]:

1. Identification of the EMS agency;
2. Patient's age, if known (or approximate age);
3. Patient's chief complaint(s) or problem;
4. Identification of the biomechanics and anatomy of the injury;
5. Basic vital signs (palpable pulse, where palpable, and rate of respiration;
6. Level of consciousness (Glasgow Coma Score or other means);
7. Other factors that require consultation with the base station;
8. Number of patients (if known); and
9. Estimated time of transport of the patient(s) to the nearest and highest level of trauma designated facility.
10. Estimated time of transport of the patient(s) from the scene to the nearest Level I or II facility

The first EMS person to determine that a patient meets the State of Washington Prehospital Trauma Triage (Destination) Procedures [Addendum 1] criteria shall attach a Washington State Trauma Registry Band to the patient's wrist or ankle.

An air ambulance transport should be considered for transport by agencies in the Northwest Region when transport by ground will be greater than 30 minutes, unless weather conditions do not allow for such use, as outlined in the State of Washington Prehospital Trauma Triage (Destination) Procedures [Addendum 1].

Data Collection

The first licensed service on scene shall be responsible for submitting the following data on all patients meeting the State of Washington Prehospital Trauma Triage (Destination) Procedures tool [Addendum 1]:

a. Run sheet number
b. Name or name code, when available;
c. Date of birth when available;
d. Age
e. Sex
f. Agency incident number;
g. Patient's trauma identification number;
h. Agency identification number;
i. First agency on scene (yes/no);
j. Transporting agency identification;
k. Level of transporting agency (BLS/ALS);
l. Incident county code;
m. Response area code of incident (urban, suburban, rural, wilderness);
n. Date of incident;
o. Time:
    1. Call received;
    2. Dispatched;
    3. Arrived at scene;
p. First scene:
    1. Systolic blood pressure;
    2. Respiratory rate;
    3. Pulse;
q. Glasgow coma score – eye, verbal and motor;
r. Systolic blood pressure less than ninety mm Hg in field (yes/no);
s. Mechanism of injury;
t. Prehospital trauma system activation (yes/no);
u. Extrication required;
v. Patient entrapped (yes/no);
w. Safety restraint or device used;
x. Field interventions done; and

y. Additional information if patient died at scene:
    1. Patient home zip code;
    2. Patient race and ethnicity when available.

The transporting service shall be responsible for submitting the following data:

a. Run sheet number or file number;
b. Name or name code
c. Date of birth, when available;
d. Age;
e. Sex;
f. Agency incident number;
g. Patient's trauma identification number
h. Agency identification number;
i. First agency on scene identification number;
j. Transporting agency identification;
k. Level of transporting agency (BLS/ALS);
l. Intra-facility transport;
m. Incident county code;
n. Response area code of incident (urban, suburban, rural, wilderness);
o. Date of incident;
p. First hospital transport to (code);
q. Second hospital transported to (code);
r. Intra-field rendezvous transport identification number;
s. Time of:
    1. Call received;
    2. Dispatch;
    3. Arrival at scene;
    4. Departure from scene;
    5. Arrival at intra-field destination or rendezvous;
    6. Arrival at first hospital;
    7. Departure from first hospital;
    8. Arrival at second hospital;
t. First:
    1. Systolic blood pressure;
    2. Respiratory rate;
    3. Pulse;
    4. Glasgow coma score – eye, verbal, and motor;
u. Systolic blood pressure less than ninety mm Hg in field;
v. Mechanism of injury;
w. Trauma triage criteria met;
x. Prehospital trauma system activation (yes/no);
y. Extrication required;
z. Patient entrapped (yes/no)
aa. Safety restrain/device used;

bb. Field interventions done;
cc. Receiving hospital contacted (code);
dd. Diverted;
ee. Mode of transport; and
ff. Additional information if patient dies in route:
    1. Patient home zip code;
    2. Patient race and/or ethnicity, when available.

Trauma verified ambulance and aid services shall collect documentation in the form of Northwest Region approved MIR forms or approved electronic computer submission.

Data shall be submitted to the Department of Health trauma registry in an approved format no later than ninety days after the end of the quarter.

PATIENT CARE PROCEDURE – Interfacility Transport

Standard

All designated trauma facilities shall have transfer agreements for the identification and transfer of trauma patients.

All interfacility transfers shall be in compliance with current OBRA/COBRA and EMTALA regulations and must be consistent with RCW 70.170.060(2) [Addendum 7].

Procedure

This is part of the Trauma Center Designation process and is addressed in the designation application process. The Northwest Region will use the procedures outlined by each facility in their designation application.

PATIENT CARE PROCEDURE – ***Transport of Patients Outside of Base Area***

Standard

All licensed ambulance and aid services shall comply with the Northwest Region EMS & Trauma System Plan and the State of Washington Prehospital Trauma Triage (Destination) Procedures [Addendum 1] as defined in WAC 246-976-390 - Verification of Trauma Care Services [Addendum 4] and transport trauma patients to the most appropriate designated trauma center or facility.

Procedure

Patients transferred out of any local base coverage area (from either the base hospital or the field) are initially the responsibility of local on-line medical control. Prehospital personnel will follow local prehospital protocols. Initial orders, which are consistent with local prehospital protocols, will be obtained from base station on-line medical control.

When the transport service crosses into destination jurisdiction, the destination on-line medical control shall be contacted and given the following information:

1. Brief history
2. Pertinent physical findings
3. Summary of treatment (per protocols and per orders from base medical control)
4. Response to treatment
5. Current condition

The destination medical control physician may add further orders provided they are within the capabilities of the transport personnel.

The nearest trauma center base station will be contacted during the transport should the patient'' condition deteriorate and/or assistance is needed. The transport unit may divert to the closest trauma center as dictated by the patient’s condition.

PATIENT CARE PROCEDURE – ***Activation of Air Ambulance for Field Response to Major Trauma***

Standard

All licensed ambulance and aid services shall comply with the Northwest Region EMS & Trauma System Plan and the State of Washington Prehospital Trauma Triage (Destination) Procedures as defined in WAC 246-976-390 - Verification of Trauma Care Services [Addendum 4] and transport trauma patients to the most appropriate designated trauma center or facility.

Procedure

The decision to activate air ambulance service for field response to major trauma shall be made by the highest certified responder from the scene with on-line medical control consultation. Where Incident Command System (ICS) is used, the commander shall be an integral part of this process.

Air ambulance services requested to respond into the Northwest Region will follow their policies for accepting a field mission and their Rotary Wing Primary Service Area criteria [Addendum 8].

REVISIONS APPROVED – March 11, 1999

REGIONAL CARE OF THE CRITICALLY ILL AND INJURED CHILD

Triage and Transfer Guidelines

Consideration should be given to early transfer of a child to the regional pediatric trauma center when required surgical or medical subspecialty care of resources are unavailable. These include, but are not limited to the following:

1. **Hemodynamically stable children with documented visceral injury being considered for "observational" management.** Although the efficacy of this approach in selected cases has been well documented, two significant caveats always apply:

   a) Hemodynamic *instability* mandates immediate operative intervention, and

   b) Nonoperative care is safe only in an environment that provides both close clinical observation *by a surgeon* experienced in the management of childhood trauma and immediately available operative care.

2. **Children with abnormal mental status.** In all but the infant, outcome from closed head injury has been shown to be significantly better for the child than for the adult. Although the quality and timeliness of initial resuscitation are the most important *determinants of outcome* from brain injury, continued comprehensive management in specialized units with multi-disciplinary pediatric critical care teams may provide a more rapid and complete recovery.

3. **Infants and small children.** Severely injured infants and small children are the most vulnerable and, frequently, the least stable trauma victims, because they require the special resources and environment of a regional pediatric trauma center, transfer should occur as soon as safely feasible.

4. **Children with injuries requiring complex or extensive reconstruction.** These services are traditionally most available in hospitals capable of functioning as a regional pediatric trauma center. It is especially important that children with impairments requiring long-term follow-up and supportive care have this provided or at last coordinated by the regional pediatric trauma center. Longitudinal follow-up of the injury-related disability is an essential requirement of the regional pediatric trauma center's trauma registry.

5. **Children with polysystem trauma requiring organ system support.** This is especially important for those patients requiring ventilatory, cardiovascular, renal, or nutritional support. Because these problems usually occur synchronously and require precise interdisciplinary coordination, they are best managed in comprehensive facilities such as regional pediatric trauma centers.

After airway management and primary resuscitation, consider the following points for transfer guidelines. A collaborative discussion is required between the transferring and receiving attending physicians.

1. Altered level of consciousness, mental status or declining trauma score (after primary resuscitation and airway management);

2. Head injury requiring CT Scan and/or neurosurgical consultation, for example: with lateralizing signs, seizures, loss of consciousness;

3. Major thoracic injury, e.g.: hemothorax, pulmonary contusion, possible great vessel injury, cardiac tramponade, flail chest;

4. Inability to evaluate abdomen due to mental status or lack of resources such as CT or peritoneal lavage;

5. Suspicion of foreign body in lower airway or main stem bronchi;

6. Unstable spinal fracture, suspected or actual spinal cord injury;

7. Primary accidental hypothermia with core temperature of 32 degrees C or less; or hypothermia with multi-system injury and core temperature of 34 degrees C or less;

8. High risk fractures such as: pelvic fracture, long bone injuries with neurovascular involvement (compromise);

9. Significant penetrating injuries to head, neck, thorax, abdomen or pelvis;

10. Need for mechanical ventilation;

11. Evidence of onset of organ failure, for example: acute respiratory distress syndrome, cardiac, renal or hepatic failure;

12. Cardiac dysrhythmias, cardiac pacing, superventricular tachycardia, or continuous infusion of one or more inotropic or cardiovascular agents, need for invasive monitoring;

13. Near drowning or asphyxiation with deteriorating mental status or progressive respiratory distress;

14. Burns of greater than 15% of the body (20% of age 10 or greater), 2nd degree or greater involving:

    a. The face, mouth and throat;
    b. Singed nasal hair;
    c. Brassy or sooty cough;
    d. Deep or excessive burns of the hands, feet, joints and/r perineum;
    e. Electrical injury (including lightening); and/or
    f. Chemical burns with threat of functional or cosmetic compromise.

    Should be transferred to a Regional Burn Center.

Referral to these centers must be protocol-driven and continuously monitored by the quality improvement process. Access to such care must be expeditious and must reflect ONLY medical need.

Adopted from: Resources for Equal Care of the Injured Patient: 1993
Committee on Trauma: American College of Surgeons

ADDENDUM 2

RCW 70.168.060 - Department duties – Timelines. The department, in consultation with and having solicited the advice of the Steering Committee shall:

(16) By July 1991, design and establish the state-wide trauma care registry as authorized in RCW 70.168.090 to

(a) assess the effectiveness of EMS/TC delivery, and
(b) modify standards and other system requirements to improve the provision of EMS/TC

ADDENDUM 3

RCW 70.168.090 – State-wide data registry – Quality assurance program – Confidentiality.

(1) By July 1991, the department shall establish a state-side data registry to collect and analyze data on the incidence, severity, and causes of trauma, including traumatic brain injury. The department shall collect additional data on traumatic brain injury should additional data requirements be enacted by the legislature. The registry shall be used to improve the availability and delivery of prehospital and hospital trauma care services. Specific data elements of the registry shall be defined by rule by the department. To the extent possible, the department shall coordinate data collection from hospitals for the trauma registry with the state-wide hospital data system authorized in chapter 70.170 RCW. Every hospital, facility, or health care provider authorized to provide level I, II, III, IV, or V trauma care services, level I, II, or III pediatric trauma care services, level I, level I-pediatric, II or III trauma-related rehabilitative services, and prehospital trauma-related services in the state shall furnish data to the registry. All other hospitals and prehospital providers shall furnish trauma data as required by the department by rule.

The department may respond to requests for data and other information from the registry for special studies and analysis consistent with requirements for confidentiality of patient and quality assurance records. The department may require requestors to pay any or all of the reasonable costs associated with such requests that might be approved.

ADDENDUM 4

WAC 246-976-390 – Verification of trauma care services

(11) Verified aid services shall meet the following minimum agency response times for response areas as defined by the department and identified in the approved regional plan:

(a) To urban response areas: Eight minutes or less, eighty percent of the time:

(b) To suburban response areas: Fifteen minutes or less, eighty percent of the time;

(c) To rural response areas: Forty-five minutes or less, eighty percent of the time;

(d) To wilderness response areas: As soon as possible.

ADDENDUM 5

WAC 246-976-390 – Verification of trauma care services

(12) Verified ground ambulance/transport services shall meet the following minimum agency response times for response areas as defined by the department and identified in the approved regional plan:

(a) To urban response areas: Ten minutes or less, eighty percent of the time;

(b) To suburban response areas: Twenty minutes or less, eighty percent of the time:

(c) To rural response areas: Forty-five minutes or less, eighty percent of the time;

(d) To wilderness response areas: As soon as possible.

ADDENDUM 6

Simple Triage and Rapid Treatment Triage Protocol (START Triage)

1. RPM method of identifying immediate patients:

   Respiration's;
   Perfusion;
   Mental status

2. Triage Criteria

   A. Immediate (RED)

      Respiration >30 per minute or absent until head repositioned,or

      Radial pulse absent or capillary refill >2 seconds, or

      Can not follow simple commands

   B. Delayed (YELLOW)

      Respiration's present and <30 per minute, and

      Radial pulse present, and can follow simple commands

      - The saying is 30 – 2 – can do, represents a delayed patient

   C. Minor (GREEN)

      Anyone that can get up and walk when you instruct them to do so

   D. Deceased (BLACK)

      Anyone not breathing after you open the airway

3. This system is limited to use in the incident where needs exceed resources immediately available

4. Frequently reassess patients and perform a more in-depth triage as more rescuers become available

ADDENDUM 7

RCW 70.170.060 – Charity care – Prohibited and required hospital practices and policies

> ***(2)*** No hospital shall adopt or maintain practices or policies which would deny access to emergency care based on ability to pay.

No hospital which maintains an emergency department shall transfer a patient with an emergency medical condition or who is in active labor unless the transfer is performed at the request of the patient or is due to the limited medical resources of the transferring hospital. Hospitals must follow reasonable procedures in making transfers to other hospitals including confirmation of acceptance of the transfer by the receiving hospital.

EMTALA federal guidelines will also be followed.